USDA-SCS
Section II-E
Technical Guide
Area 2, Texas

CLAY LOAM
RANGE SITE DESCRIPTION
PE 20-33

LAND RESOURCE AREA HP
Location
date
Approved By

1. PHYSIOGRAPHIC FEATURES: This site is on broad, nearly level to gently sloping plains. Slopes are plane to slightly convex and range from 0 to 5 percent, but are mainly 0 to 3 percent. Elevation varies from about 3,000 feet in Briscoe County to 4,700 feet in northwest Dallam County.

2. SOILS:

a. These are deep, well drained, moderately to very slowly permeable loamy soils. Typically, they have a dark colored, non-calcareous, clay loam surface layer over a very firm clay or clay loam subsoil. The natural fertility of these soils is high. They take in water readily and have a high water holding capacity. The root zone of these soils is deep, and can be readily pentrated by plant roots.

b. Major soils associated with this site are:

Pullman CL, SiCL; Sherm CL, SiCL; Olton L,CL; Acuff L

c. Specific site location:

APPROVAL SIGNATURE	DATE
Area Conservationist	2/23/79
Field Specialist-Range	3/5/79
Field Specialist-Biology	3/16/79

also known as a Hardland site or Deep Hardland site

3. CLIMATE:

See field office climate description.

4. CLIMAX VEGETATION:

a. The climax plant community is dominated by short grasses suth as blue-grama and buffalograss. The site supports a very small percentage of climax forbs and woody plants. Lack of variety in vegetation is due to soil-air-moisture relationships.

Relative Percentage of Total Plant Community (air-dry weight)

Grasses 95%		Woody Plant T	Forbs 5%	
blue grama 50		yucca T	wild alfalfa	)
buffalograss 20			prairie clover	)
sideoats grama 5			western ragweed	)
galleta or tobosa 15			trailing wildbean	)
western wheatgrass	)		prairie coneflower	) 5
vine mesquite	) 5		scarlet globemallow	)
silver bluestem	)		pentemon	)
threeawns T			annual weeds	)
Halls panicum T				

b. If retrogression is cattle induced, blue grama and sideoats grama will decrease. Buffalograss, threeawns, galleta or tabosa are the principal increasers.

If the plant community continues to degenerate, sand muhly, broom snakeweed, mesquite, cholla and prickly pear will tend to invade the site. Blue grama tends to become a sod-like plant instead of a bunch grass, vigor and forage production is reduced. Canopy cover of mesquite and cholla can be as high as 30-50%. Forage production will be reduced considerably.

c. Approximate total annual production of this site in excellent condition ranges from 1000 to 2000 pounds of air-dry vegetation per acre, depending on canopy, rainfall and growing conditions. Most of this production is palatable to livestock. During droughty years production will drop as low as 200# ac.

5. WILDLIFE ADAPTED TO THE SITE: This site is inhabited by mule deer, antelope, dove, and quail. Although cover is poor for deer, it is excellent habitat for antelope due to the area being void of tree type cover. Other small animals, predators and birds feed, nest and raise thier young on the site. Prairie dogs are often associated with this site. At one time the black-footed ferret, an endangered species, may also have inhabited the site.

6. ESTHETIC AND RELATED VALUES: This site is typical of wide-open-spaces of the High Plains. Since there is usually very little woody vegetation one can see for several miles. During late Spring and early Summer cholla cactus display their beautiful maroon flowers. Both cholla and yucca are used for land scaping.

7. HYDROLOGIC CHARACTERISTICS: The infiltration and transmission rates of these soils, when wet, is moderately slow to medium. Under proper management, sediment potentials are low. Because of the low, variable annual rainfall, there is very little ground water recharge. These soils are in wind erodibility groups 5 and 6. The hazard of soil blowing is slight.

8. GUIDE TO INITIAL STOCKING RATE:

a.

Condition Class	Climax vegetation Percent	Acres/AU/Yearlong
Excellent	76-100	18-24
Good	51-75	22-36
Fair	26-50	34-48
Poor	0-25	46 +

b. Seeded Areas

	*100-76	75-51	50-26	25-0
	16-20**	21-35	36-53	54-73
Sideoats grama	18-22	23-37	38-55	56-75
Blue grama, buffalograss	19-21	22-36	37-54	55-74
Sideoats grama, blue grama				

* Percent ground cover
** Acres/AU/Year long

RELATIVE FORAGE QUALITY OF SPECIES 1/

a. For cattle:

Primary 2/	Secondary 3/	Low Value 4/
blue grama	galleta	sand muhly
buffalograss	tabosagrass	western ragweed
sideoats grama	silver bluestem	prairie cone flower
Western wheatgrass	three awns	scarlet globemallow
yucca blooms	Halls panicum	trailing wildbean
	vine mesquite	penstemon
	prairie clovers	annual forbs
	wild alfalfa	
	mesquite beans	

b. For mule deer and antelope:

trailing wildbean	blue grama	cholla fruite
wild alfalfa	buffalograss	sideoats grama
prairie clovers	sand dropseed	galleta
yucca blooms	scarlet globemallow	tobosa
penstemon	Western wheatgrass	threeawns
annual forbs	Western ragweed	Halls panicum
	mesquite beans	silver bluestem

c. Dove and quail 5/

Western ragweed	broomweed	coneflower
sunflower	sand dropseed	blue grama
croton	cholla fruite (seed)	buffalograss
wild alfalfa	vine mesquite	silverleaf-night-
trailing wildbean	praire clover	nightshade
Hall's panicum	penstemon	threeawns
		sideoats grama
		galleta
		tobosa
		sand muhly
		Western wheatgrass
		silver bluestem
		scarlet glovemallow

1/ This rating system provides general guidance as to animal preference for plant species. It also indicates competition between kinds of animals for the various plants. Grazing preference changes from time to time and place to place depending upon the animal, plant palatability and nutritive valu e, stage of growth and season of use, relative abundance, and associated plants. Grazing preference does not necessarily reflect the place of a plant in the range ecosystem.

2/ These species generally decrease under prolonged heavy grazing.

3/ These plants usually increase initially, then decrease under prolonged heavy use.

4/ These plants continue to to increase with heavy grazing use.

5/ For these wildlife species the terms primary, secondary and low value indicate animal preference only. They do not indicate plant response to feeding pressure; ~~nor do they have any ecological significance~~.